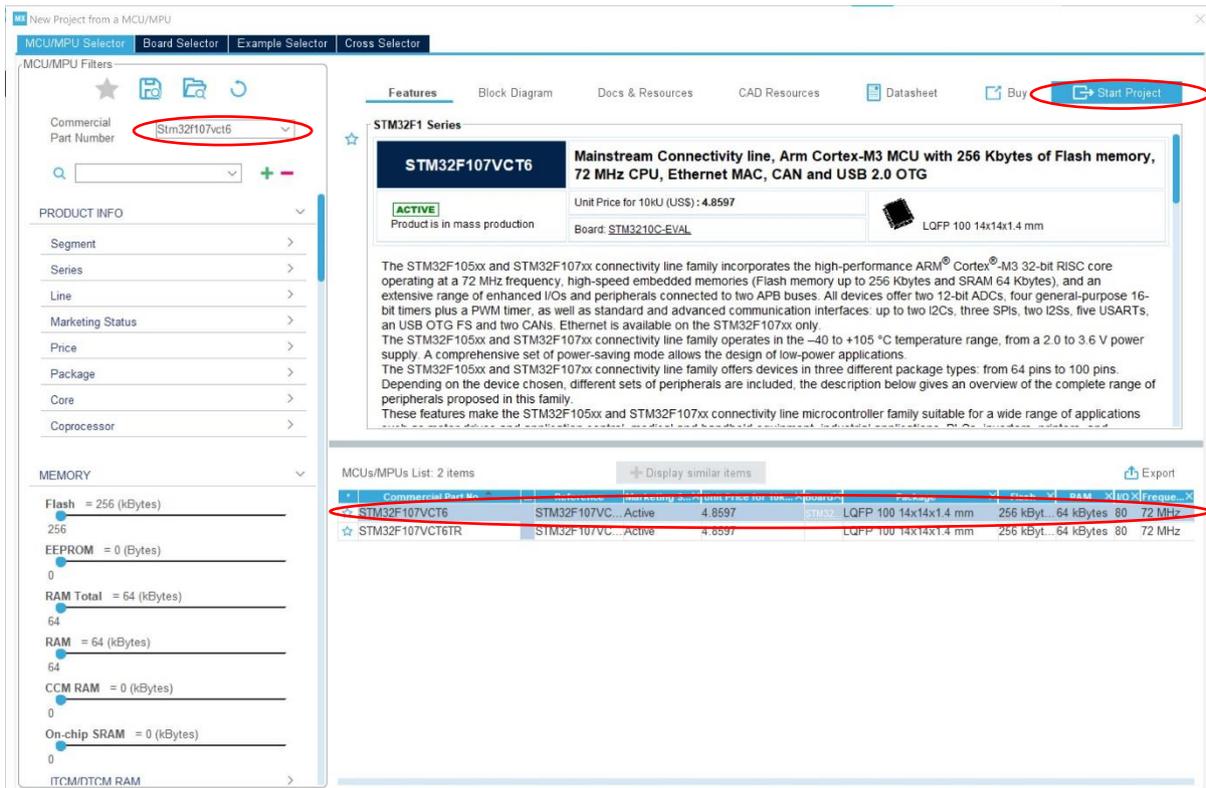
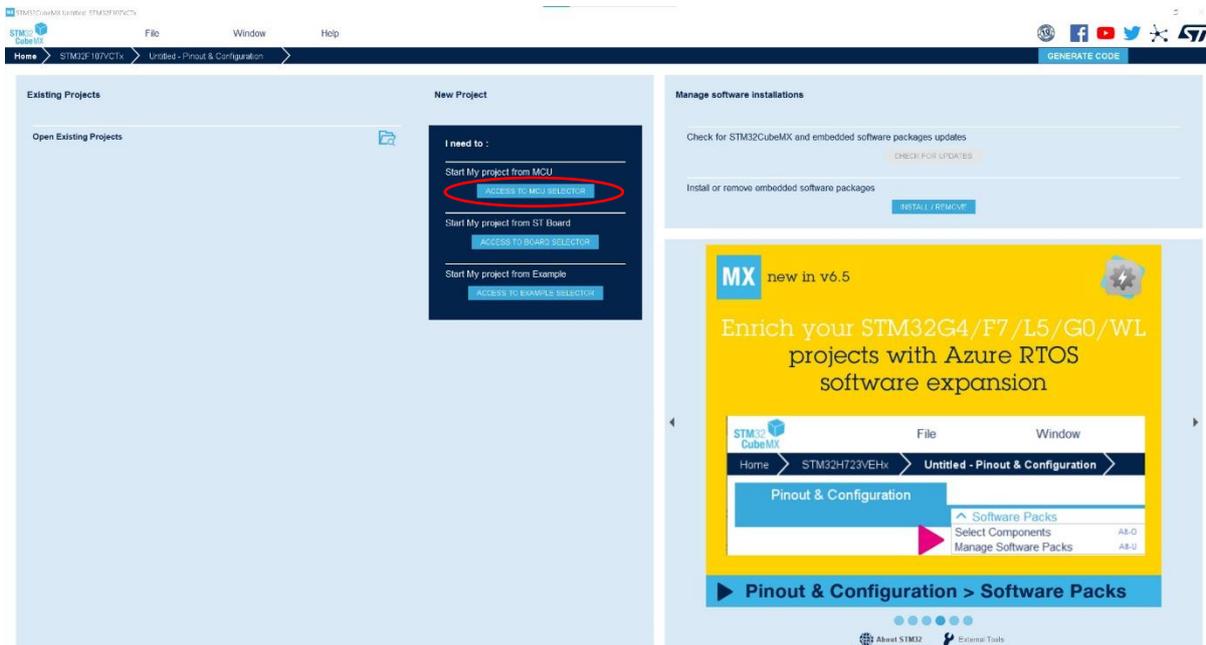


# STM32F107VCT6 ICMP-Verbindung Grundkonfiguration mit CubeMX.

## 1. MCU wählen

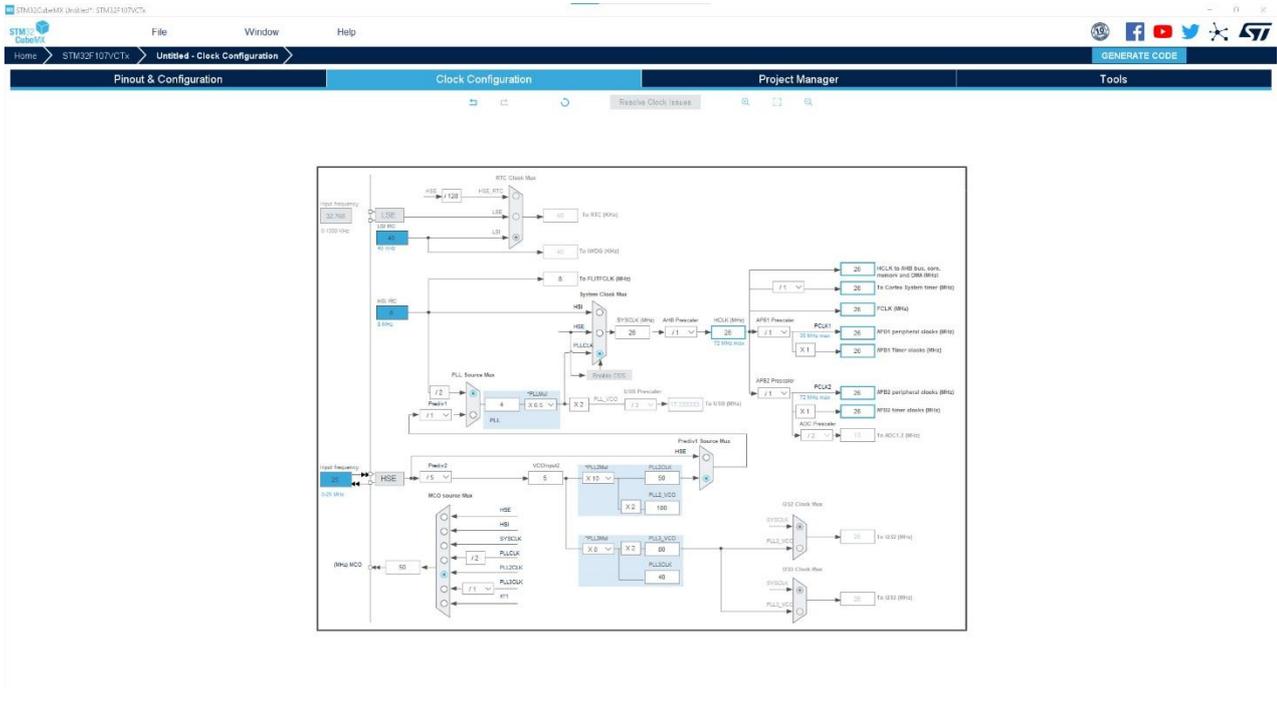


## 2. Master Clock Output und High Speed Clock aktivieren

The screenshot displays the STM32CubeMX software interface. The top navigation bar includes 'File', 'Window', and 'Help' menus, along with social media icons and the ST logo. The main workspace shows a pinout configuration for an STM32F107VCTx microcontroller. A sidebar on the left lists various system components, with 'RCC' highlighted in red. The central area features a 3D model of the microcontroller chip with its pinout labeled. Below the workspace, the 'RCC Mode and Configuration' window is open, showing the following settings:

RCC Mode and Configuration	
Mode	
High Speed Clock (HSE)	Crystal/Ceramic Resonator
Low Speed Clock (LSE)	Disable
<input checked="" type="checkbox"/> Master Clock Output	

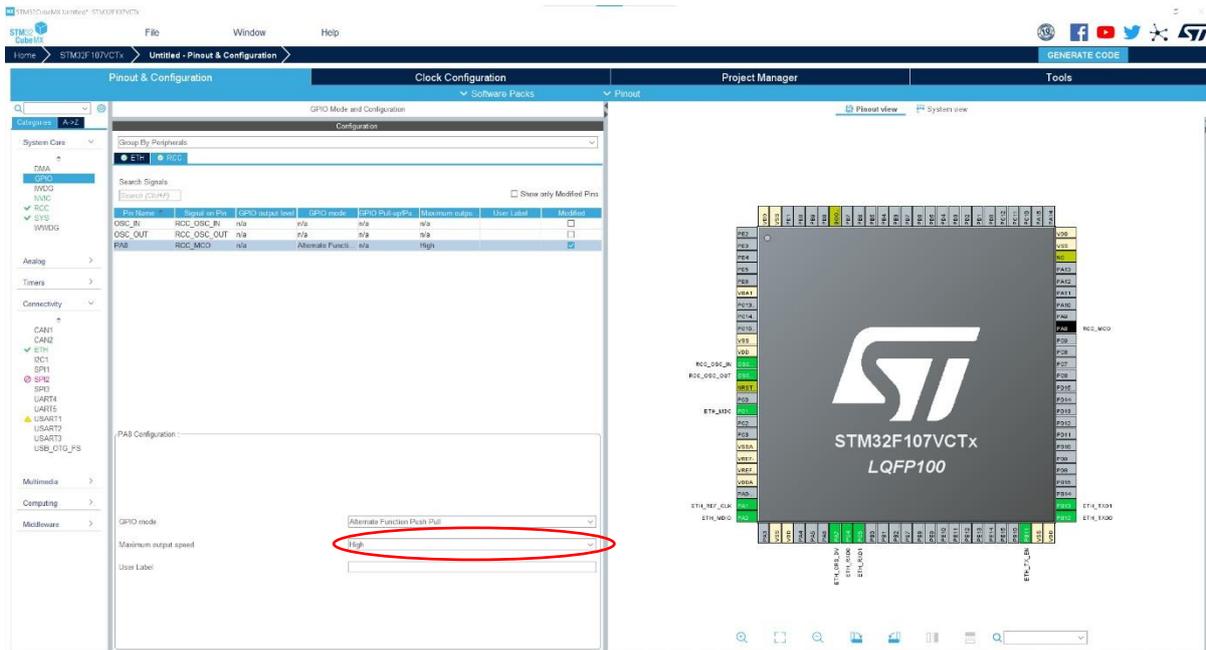
### 3. Clocks wie im Bild gezeigt konfigurieren



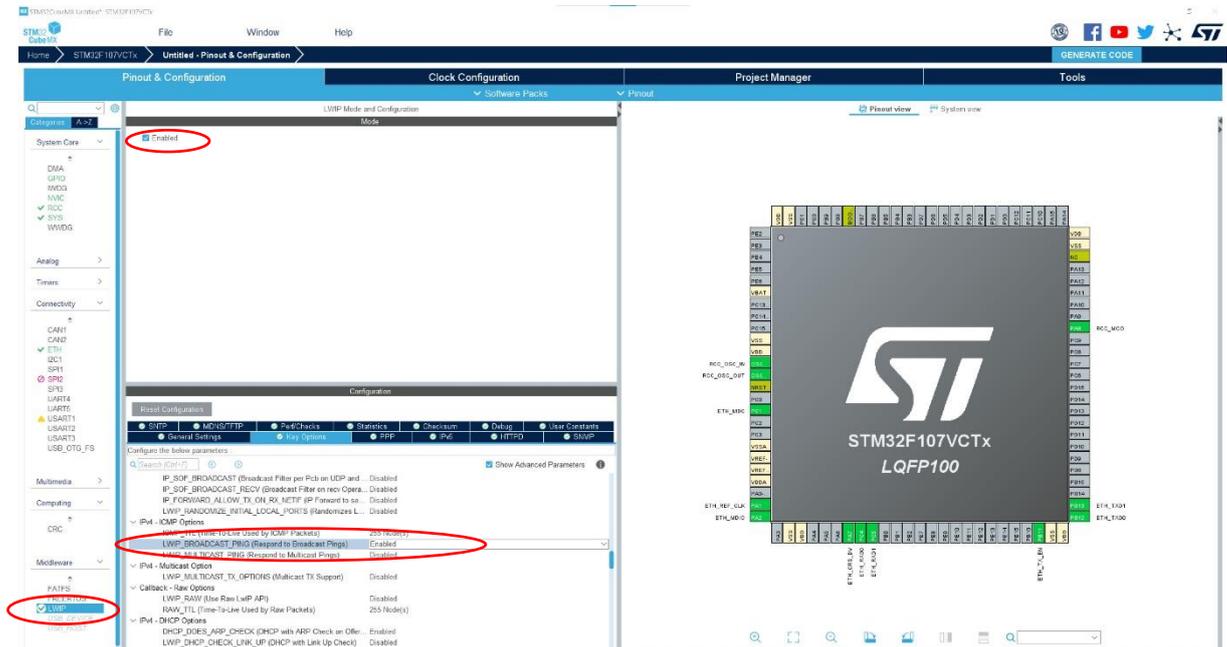
### 4. ETH aktivieren, PHY – Address -> 0

The screenshot shows the STM32CubeMX Pinout & Configuration interface. The 'Pinout' tab is active, and the 'General' configuration for the Ethernet (ETH) peripheral is shown. The 'PHY Address' is set to 0, which is circled in red. The pinout diagram on the right shows the physical connections for the STM32F107VCTx LQFP100 package, including pins for ETH\_TX+, ETH\_TX-, ETH\_RX+, ETH\_RX-, ETH\_MDC, and ETH\_MDIO.

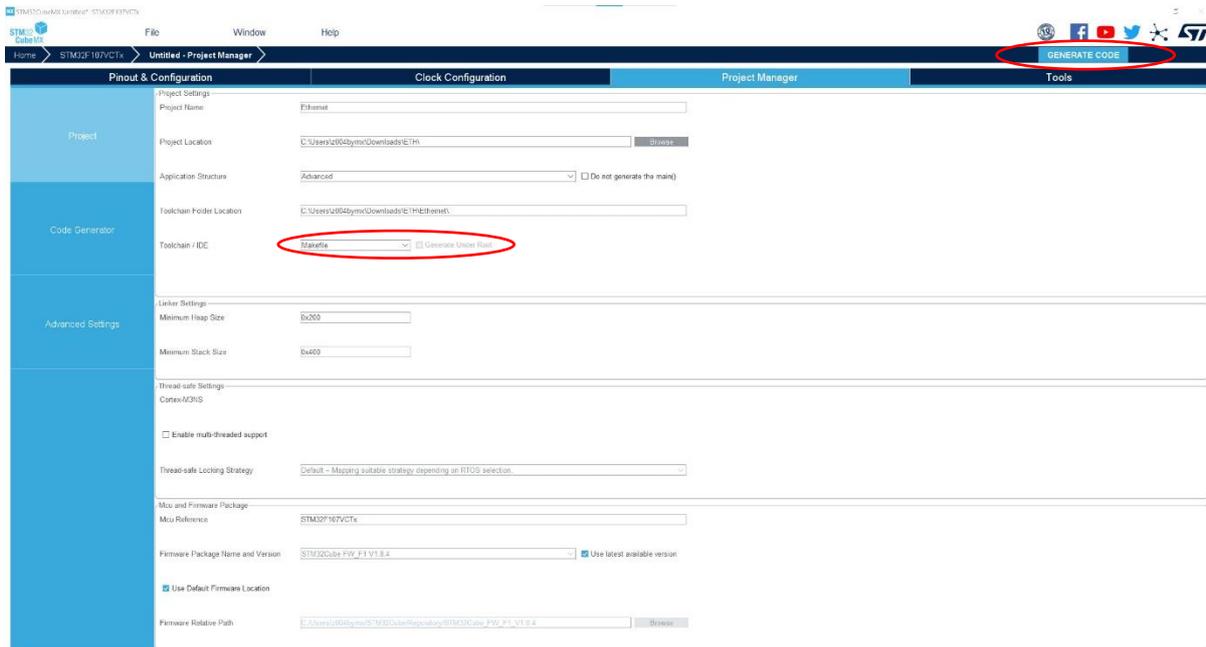
## 5. GPIO -> RCC -> PA8: Maximum output speed auf "High" stellen



## 6. LWIP (Leighweight IP) aktivieren, ICMP Broadcast und Multicast Ping unter „Key Options“ aktivieren



## 7. Unter „Project Manager“ Toolchain / IDE -> Makefile wählen, und Code generieren



## 8. Mainfile anpassen

CubeMX generiert ein Projektverzeichnis, welches nun von der gewünschten IDE (wir verwenden VS Code) genutzt werden kann. Der generierte Code genügt, um einen Link herzustellen (Windows zeigt in den Adapteroptionen „undefined Network“). Damit das Board eine IP-Adresse erhält, muss main.c wie folgt angepasst werden:

```
56 /* USER CODE BEGIN 0 */
57 extern struct netif gnetif;
58 /* USER CODE END 0 */

94     while (1) {
95         /* USER CODE END WHILE */
96         ethernetif_input(&gnetif);
97         sys_check_timeouts();
98         /* USER CODE BEGIN 3 */
99     }
100 /* USER CODE END 3 */
```

Das Board erhält nun eine IP-Adresse vom DHCP-Server. Eine manuelle IP-Konfiguration lässt sich bei CubeMX unter LWIP -> General Settings einstellen. Hierzu muss zuerst DHCP deaktiviert werden.

